

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

TRANSLATION
PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

99P06030

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/011173

International filing date (day/month/year)

04.08.2004

Priority date (day/month/year)

29.08.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

TDK CORPORATION

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/IP

Authorized officer

Facsimile No.

Telephone No.

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Box No. 1 Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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International application No.

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-6	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-6	NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO
2. Citations and explanations:			
<p>Document 1: JP, 2001-44064, A (Matsushita Electric Industrial Co. Ltd.), 16 February 2001 (16.02.01), paragraphs [0027]-[0031], Fig. 3</p> <p>Document 2: JP, 2002-343674, A (Matsushita Electric Industrial Co. Ltd.), 29 November, 2002 (29.11.02), paragraphs [0019]-[0070], Figs. 1-16</p> <p>Document 3: JP, 11-238646, A (TDK Corp.), 31 August, 1999 (31.08.99), paragraph [0036], Fig. 2</p> <p>Document 4: JP, 7-312326, A (Matsushita Electric Industrial Co. Ltd.), 28 November, 1995 (28.11.95), paragraph [0017], Fig. 1</p> <p>1. Claims 1-3, 5, and 6</p> <p>Document 1 discloses a manufacturing method of a multilayer block (corresponds to laminated unit). A conductor layer roll (corresponds to roll body for electrode layer (1)) and ceramic sheet roll (corresponds to green sheet roll body (3)) are rolled together. A conductor layer attaching ceramic sheet (corresponds to multilayer unit sheet (40)) is formed by pressing the ceramic sheet 13 (corresponds to dielectric layer (33)) on the conductor layer 12. After these are wound together to form a conductor layer ceramic sheet roll (corresponds to roll body (4) of a multilayer unit sheet). On a surface of the base film 10 (corresponds to support sheet), the conductor layer 12 and the ceramic sheet 13 are formed via the release layer 11. The release layer 11 (corresponds to mold release layer) is also formed at rear of the base film 10. The release layer 11 formed at rear of the base film 10 corresponds to back transfer preventive layer (21) of the present application.</p> <p>Document 2 discloses a technology to adhere each lamina of the multilayer block with a binder layer 15 (corresponds to adhesive layer (24)), and a technology to respectively transfer an internal electrode 18, a green sheet 14 and a binder layer 15, which are formed on a carrier film 13 (corresponds to support layer) via a die lubricant layer 12 (corresponds to mold release layer (23)).</p> <p>Also, for example, as disclosed in document 3, a green inner electrode section 22 (corresponds to electrode layer) and a green dielectric section 23 (corresponds to spacer layer) formed in a complementary pattern is the well-known technology.</p> <p>Furthermore, whether to adhere the ceramic sheet on the conductive layer or to adhere the conductive layer on the ceramic sheet are equivalent, and merely is a matter of design choice appropriately set to be obtained by a person skilled in the art.</p> <p>Accordingly, a person skilled in the art could have easily conceived of forming the binder layer between the multilayer block and the base film, and between the conductive layer and ceramic sheet, at the same time as transferring to the conductive layer or ceramic sheet the ceramic sheet or the conductive layer, by applying known technologies and the technology described in document 2 to the multilayer block manufacturing method described in document 1.</p> <p>Hence, the subject matters of claims 1-3, 5 and 6 do not appear to involve an inventive step.</p>			

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2. Claim 4

Document 4 discloses a technology to form a film for electrode formation (corresponds to electrode sheet (10)) composed of a base film 1 (corresponds to first support sheet (11)), a layer 16 exclusively used for exfoliation (corresponds to mold release layer (12)), a layer 17 exclusively used for electrode-pattern formation (corresponds to print assist layer (13)), and an electrode pattern 9.

Accordingly, a person skilled in the art could have easily conceived of forming a layer exclusively used for electrode-pattern between the multilayer block described in document 1 and the conductive layer, by applying the known technologies and the technologies described in documents 2 and 4 to the multilayer block manufacturing method described in document 1.

Hence, the subject matter of claim 4 does not appear to involve an inventive step.